

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Investigation by the Department of Telecommunications and Energy on its own Motion into the Appropriate Pricing, based upon Total Element Long-Run Incremental Costs, for Unbundled Network Elements and Combinations of Unbundled Network Elements, and the Appropriate Avoided Cost Discount for Verizon New England, Inc. d/b/a Verizon Massachusetts' Resale Services in the Commonwealth of Massachusetts

D.T.E. 01-20

**REBUTTAL TESTIMONY OF CATHERINE E. PITTS
ON RECONSIDERATION**

ON BEHALF OF AT&T AND WORLDCOM

PUBLIC VERSION

October 16, 2002

1 **I. INTRODUCTION.**

2 **Q. PLEASE STATE YOUR NAME, EMPLOYER, AND BUSINESS ADDRESS.**

3 A. My name is Catherine E. Pitts (formerly Petzinger). I am a consultant working on behalf of
4 AT&T and WorldCom. My address is 810 Long Drive Road, Summerville, South Carolina.

5 **Q. ARE YOU THE SAME CATHERINE E. PITTS WHO FILED DIRECT**
6 **TESTIMONY ON RECONSIDERATION?**

7 A. Yes.

8 **II. RTU AND OTHER COSTS FOR NEW SWITCHES.**

9 **Q. MR. MAZZIOTTI ASSERTS AT PAGE 4 OF HIS INITIAL TESTIMONY THAT**
10 **THE DEPARTMENT SHOULD ADD ADDITIONAL RIGHT-TO-USE, OR “RTU”,**
11 **FEES OF APPROXIMATELY \$1.88 MILLION PER NEW SWITCH ON TOP OF**
12 **THE SWITCH MATERIAL COSTS AND OTHER LOADINGS REFLECTED IN**
13 **VERIZON’S COST MODEL.**

14 **IS THIS ASSERTION SUPPORTED BY THE UNDERLYING DOCUMENTS**
15 **THAT VERIZON HAS PRODUCED IN DISCOVERY?**

16 A. Absolutely not. To the contrary, the additional documentation that Verizon has now provided
17 confirms what I explained in my Direct Testimony on Reconsideration at pages 10-14, that the
18 switch price of approximately \$36 per line discussed in Verizon’s reply brief includes not only
19 the cost of switching hardware but also covers switch software costs (i.e., RTU fees) as well as
20 the vendor portion of engineering and installation costs. No additional costs should be assumed
21 for initial RTU fees for new switches, because such costs are already fully covered by a new
22 switch price of approximately \$36 per line.

23 **Q. I’D LIKE YOU TO DISCUSS VERIZON’S DOCUMENTATION OF EACH OF THE**
24 **FIVE SWITCH BIDS THAT MR. MAZZIOTTI CITES AT PAGES 4-5 OF HIS**
25 **INITIAL SUPPLEMENTAL TESTIMONY.**

26 **COULD YOU FIRST EXPLAIN WHAT IS REVEALED BY THE**
27 **DOCUMENTATION REGARDING NORTEL’S BID FOR A SWITCH AT**
28 **FREDERICK, MD?**

1 A. Certainly. This Nortel switch bid was roughly twice the cost of the Lucent proposal and was
2 therefore rejected by Verizon. Verizon instead accepted Lucent's bid of approximately
3 <Begin VZ Proprietary XX End VZ Proprietary> per line including the RTU fees for the
4 5E15 base software as well as vendor engineering and installation. Mr. Mazziotti states that
5 Nortel's bid included a cost of <Begin VZ Proprietary XXXXXX End VZ Proprietary> for
6 initial RTU fees. What he neglects to mention is that the winning bid by Lucent provided the
7 equivalent software for only <Begin VZ Proprietary XXX End VZ Proprietary>. Exhibit 5
8 to this testimony collects the relevant documentation produced by Verizon and contained in
9 Exhibit ATT-VZ 31-1.¹

10 Thus, Mr. Mazziotti's testimony is very misleading. The Nortel bid does not appear to
11 reflect a serious attempt to win the order for this switch. In any case, it does not reflect the
12 price actually paid by Verizon. It is therefore irrelevant to the Department's evaluation of the
13 prices actually paid by Verizon for new switching.

14 **Q. WHAT ABOUT THE DOCUMENTATION REGARDING THE SWITCH**
15 **PURCHASE FOR MOORESTOWN, NEW JERSEY. WHAT DOES IT SHOW?**

16 A. First of all, you are correct to refer to Moorestown, New Jersey, as Mr. Mazziotti does at page
17 14 of his testimony. Although Mr. Mazziotti refers to Moorestown, NY, at page 4, this is
18 clearly a typographical error; the backup documentation provided by Verizon refers to
19 Moorestown, New Jersey.

20 As was the case for the Frederick, MD, switch, the documentation for Moorestown
21 shows that the Nortel bid was approximately twice the Lucent proposal and was therefore

¹ Exhibits 1-4 are attached to the Direct Testimony of Catherine E. Pitts on Reconsideration.

1 rejected by Verizon. Verizon awarded the bid to Lucent at approximately <Begin VZ
2 Proprietary XXX End VZ Proprietary> per line, including all hardware as well as initial RTU
3 fees for software, and vendor engineering and installation. Lucent's bid and Verizon's switch
4 bid comparison sheet both state that the Lucent offer accepted by Verizon <Begin VZ
5 Proprietary XX XXXX X XX XXX XX XXX XX XXXX XX XX XXX XXX X XX End
6 VZ Proprietary>. Exhibit 6 to this testimony collects the relevant documentation produced by
7 Verizon and contained in Exhibit ATT-VZ 31-1.

8 Thus, once again Mr. Mazziotti's testimony is very misleading. He asserts that "the cost
9 of initial RTU fees" for the Moorestown switch was <Begin VZ Proprietary XXXXXXXX
10 End VZ Proprietary>. But that is simply untrue. The relatively low total price per line actually
11 accepted by Verizon included all initial software.

12 **Q. HAS VERIZON BEEN ABLE TO PROVIDE DOCUMENTATION TO SUPPORT**
13 **MR. MAZZIOTTI'S ASSERTION REGARDING INITIAL RTU FEES INCURRED**
14 **BY THE PEARL STREET, NEW YORK, SWITCH?**

15 A. No. The documentation provided by Verizon for the Pearl Street, NY, switch – in response to
16 request ATT-VZ 31-1 – is incomplete. Verizon provided only a Nortel proposal. Unlike for
17 the other three Nortel figures cited by Mr. Mazziotti, Verizon did not provide any
18 documentation regarding competing bids, analyzing all competing bids, or indicating which bid
19 was ultimately accepted. As a result, there is no way for the Department to evaluate whether
20 the figure cited by Mr. Mazziotti for Pearl Street, NY, has any meaning at all. Therefore, it
21 should not be relied upon as substantiation for Verizon's claimed new switch right to use fees.

22 **Q. WHAT ABOUT THE DULLES CORNER, VA, SWITCH BID DOCUMENTATION?**
23 **WHAT DOES IT SHOW?**

1 A. In this instance Mr. Mazziotti correctly represents that Nortel won the bid, and accurately states
2 the initial RTU fee quoted by Nortel for this switch in the “Table 3” reflecting the discounted
3 prices agreed to by Nortel. However, his testimony is misleading in that it fails to put this figure
4 in context. Verizon’s own analysis shows that the Nortel bid amounts to a cost of <Begin VZ
5 Proprietary XX End VZ Proprietary> per line, once again including all hardware as well as
6 initial RTU fees for software, and vendor engineering and installation. Exhibit 7 to this testimony
7 collects the relevant documentation produced by Verizon and contained in Exhibit ATT-VZ 31-
8 1.

9 Thus, the initial RTU fee cited by Mr. Mazziotti for this switch should not be added to
10 the switch price input, as Mr. Mazziotti asserts. To the contrary, once again (as for all of the
11 accepted switch bids documented by Verizon in this proceeding) the switching price already
12 includes the initial RTU fees.

13 **Q. AT PAGES 4-5 OF HIS INITIAL TESTIMONY, MR. MAZZIOTTI ASSERTS THAT**
14 **WITH RESPECT TO LUCENT BIDS ON NEW SWITCH PURCHASES “THE**
15 **BASE SOFTWARE FOR GENERIC 5E14 WAS PAID FOR IN A BUYOUT,” AND**
16 **ANY “FEATURE SPECIFIC SOFTWARE [IS] IDENTIFIED AND PRICED WHEN**
17 **A SWITCH IS ACTUALLY ORDERED.” HE ASSERTS THAT AS A RESULT**
18 **LUCENT BIDS DO NOT SHOW ALL SOFTWARE COSTS AND THAT, BASED**
19 **ON VERIZON’S RECENT PURCHASE OF A LUCENT 5E SWITCH FOR**
20 **FRANKLIN STREET IN BOSTON, AN ADDITIONAL RTU COST OF ROUGHLY**
21 **< BEGIN VZ PROPRIETARY XXXXXXXXXX END VZ PROPRIETARY> SHOULD**
22 **BE ADDED FOR EACH LUCENT SWITCH.**

23 **ARE THESE ASSERTIONS CONSISTENT WITH VERIZON’S**
24 **DOCUMENTATION FOR THE FRANKLIN STREET SWITCH PURCHASE, AND**
25 **VERIZON’S OTHER DISCOVERY RESPONSES?**

26 A. Once again, not at all. Let’s start with the statement “the Base software for Generic 5E14 was
27 paid for in a buyout,” and the assertion that this cost must therefore be added to the cost of
28 Lucent switches. There are at least two reasons why this is misleading.

1 First, Verizon admitted in a subsequent discovery response that its buyout of complete
2 rights to use Lucent's base 5E14 software cost only <Begin VZ Proprietary XXXXXXXX
3 End VZ Proprietary> per switch. See Exhibit ATT-VZ 31-21P. The relevant portion of this
4 response is reproduced in Exhibit 8 to this rebuttal testimony.

5 Second, in any case, the Franklin Street switch was not equipped with 5E14 base
6 software. Instead, it was equipped with more current 5E15 base software, which Lucent
7 agreed to provide <Begin VZ Proprietary XX XXX XXX XXXX XX End VZ
8 Proprietary>. See Exhibit 9 to this testimony, which collects the relevant documentation
9 produced by Verizon and contained in Exhibit ATT-VZ 31-1.

10 **Q. CAN MR. MAZZIOTTI'S ASSERTION REGARDING ADDITIONAL LUCENT**
11 **RTU FEES BE JUSTIFIED BY THE COSTS OF FEATURE SPECIFIC SOFTWARE,**
12 **THE SECOND OF THE TWO ITEMS TO WHICH HE REFERS?**

13 A. No. When Verizon's staff analyzed Lucent's bid for the Franklin Street switch, they were
14 specifically instructed to price out the features not included in Lucent's bid price. They did so,
15 and concluded that the actual software cost for those features would be <Begin VZ
16 Proprietary XXXX End VZ Proprietary>, as reflected on the Verizon Switch Bid
17 Comparison for this switch, on the line labeled "Feature Rollout Penalty." To be fair, Lucent
18 did state in its bid that "application software for upgrades will be developed at time of order,"
19 apparently referring to new features that are expected to become available in the future. But
20 once again Verizon quantified this cost, in this case at <Begin VZ Proprietary XXXXXX End
21 VZ Proprietary>, as reflected on the Verizon Switch Bid Comparison for this switch, on the
22 line labeled "Verizon Adjustment to Software Upgrade Costs." See Exhibit 9 to this testimony
23 for this documentation, taken from Exhibit ATT-VZ 31-1.

1 **Q. WHAT IS THE BOTTOM LINE COST FOR THE FRANKLIN STREET SWITCH?**

2 A. The documentation produced by Verizon shows that Verizon accepted Lucent's bid of under
3 <Begin VZ Proprietary XXXXXXXXXX End VZ Proprietary> for this switch, which
4 represents a cost of <Begin VZ Proprietary XXX End VZ Proprietary> per line. This per
5 line cost reflects all hardware and software costs (including Verizon's own estimate of future
6 feature package and software upgrade costs), plus transportation and vendor engineering and
7 installation costs. Since Verizon's own documentation proves that this price includes all
8 software costs, there is no basis whatsoever for Mr. Mazziotti's assertion that the Department
9 should add another <Begin VZ Proprietary XXXXXX End VZ Proprietary> for additional
10 software costs.

11 **Q. WELL THEN, WHAT IS THE BASIS FOR MR. MAZZIOTTI'S ASSERTION AT**
12 **PAGE 5 OF HIS INITIAL TESTIMONY OF SUBSTANTIAL ADDITIONAL RTU**
13 **FEES FOR LUCENT SWITCHES?**

14 A. The figure cited by Mr. Mazziotti has essentially been made up for the purposes of this
15 proceeding, and has no demonstrated relation to any actual switch purchase by Verizon.
16 According to Mr. Mazziotti's testimony and his response in Exhibit ATT-VZ 31-22, Verizon
17 purportedly listed the software feature packages installed with the new Franklin Street switch,
18 and then asked Lucent to price those packages under the assumption that Verizon had accepted
19 a bid equal to a discount of <Begin VZ Proprietary XXXXXXXX End VZ Proprietary> off
20 of list prices. Both parts of this assertion miss the mark.

21 First, Mr. Mazziotti misled the Department when he asserted that the list of software
22 packages underlying this analysis is the software purchased for the Franklin Street switch. In
23 fact, Verizon concedes in a subsequent discovery response that it analyzed software for a

1 hypothetical “typical office of 30,000 analog lines and 500 digital access” lines. *See* Ex. ATT-
2 VZ 31-22, Note 1 to Attachment. The Franklin Street switch was outfitted to handle <Begin
3 VZ Proprietary XXXX XXX XXX XXX XXXX XX End VZ Proprietary>, with additional
4 capacity for a total of <Begin VZ Proprietary XXXX End VZ Proprietary> lines. Thus, the
5 software listing on which Verizon relies was not taken from the Franklin Street switch, but was
6 just made up for heuristic purposes.

7 Second, Verizon has provided no evidence that this assumed discount reflects the prices
8 it actually pays in competitive bid situations. To the contrary, as indicated in my analysis of the
9 documentation for the Frederick, MD, Moorestown, NJ, and Franklin Street, MA, switches, in
10 practice Lucent offers its switching software for much, much less than the prices arbitrarily
11 assumed by Verizon for purposes of this artificial analysis. Quite simply, Verizon’s own
12 evidence of the prices it actually pays is much more meaningful than its hypothetical analysis of
13 possible software costs under assumptions not shown ever to have been realized in connection
14 with any actual switch purchase.

15 **Q. COULD YOU SUMMARIZE YOUR CONCLUSIONS REGARDING VERIZON’S**
16 **ASSERTION THAT THE DEPARTMENT SHOULD ADD INITIAL RTU FEES OF**
17 **\$1.88 MILLION PER SWITCH?**

18 A. The Department should reject this assertion. Verizon’s own documentation shows that the
19 switch material price paid by Verizon covers all initial software RTU costs. It would be
20 improper double counting to add those same costs in a second time. Furthermore, Verizon’s
21 estimate of the cost per switch for initial RTU fees cannot be squared with the evidence.
22 Verizon’s own documentation shows that the actual cost for initial RTU fees is far, far less.

1 **III. UNINSTALLED MATERIAL PRICE PER LINE FOR NEW SWITCHES**

2 **Q. VERIZON STATED IN ITS REPLY BRIEF AT PAGE 67 THAT THE**
3 **COMPETITIVE BID DATA PRODUCED BY VERIZON IN RESPONSE TO RR-**
4 **ATT-3 REFLECTS AN UNINSTALLED SWITCH MATERIAL PRICE OF \$36 PER**
5 **LINE. WHEN ASKED IN ATT-VZ 31-4 TO EXPLAIN AND DOCUMENT THIS**
6 **FIGURE, VERIZON STATES THAT IT CAN BE FOUND ON THE VENDOR BID**
7 **COMPARISON SHEET FOR THE EASTWICK, PENNSYLVANIA SWITCH, ON**
8 **THE 100% BID PAGE. IS THIS TRUE?**

9 **A.** No. The vendor switch bid comparison prepared by Verizon for its Eastwick, PA, switch –
10 priced at 100% of the offices bid, as Verizon states in its discovery response – shows that
11 Nortel’s bid totaled \$31 per line, not \$36 per line. This Eastwick sheet also shows that the
12 costs of software (RTU fees) and vendor engineering and installation were included in the \$31
13 per line.

14 **Q.** **AT PAGE 13 OF HIS INITIAL TESTIMONY, MR. MAZZIOTTI ASSERTS THAT**
15 **THIS FIGURE SHOULD BE IGNORED, BECAUSE IT IS UNFAIR TO USE “A**
16 **SINGLE HIGH SWITCH DISCOUNT AS A BASIS FOR ASSUMING THAT ALL**
17 **SWITCH EQUIPMENT COULD BE MADE AVAILABLE AT THAT DISCOUNT**
18 **LEVEL.” IS HIS CHARACTERIZATION FAIR, AND CAN IT BE SQUARED**
19 **WITH THE EVIDENCE?**

20 **A.** No, it is not a fair characterization and it cannot be squared with the evidence. AT&T had
21 previously focused on a single switch (for Chester, PA, not for Eastwick), because from
22 Verizon’s response to RR-ATT-3 it appeared that this was the highest price actually paid by
23 Verizon for a new Nortel switch. But the Department now has available to it information
24 regarding the price per line paid by Verizon for new switches – including in each instance
25 switching hardware, software, and vendor engineering – for 16 different switches. The total
26 cost per line for each of these switches is summarized in the following table. The average of

these 16 different prices is <Begin VZ Proprietary X End VZ Proprietary> per line, which is almost identical to the \$36 per line to which Verizon admitted in its reply brief.

**Verizon Switch Cost Per Line
(inc. RTU fees and vendor installation)**

< BEGIN VZ PROPRIETARY

<u>Switch Location</u>	<u>Cost per Line</u>
1 Chester, PA	XXX
2 East Liberty, PA	XXX
3 Easton, PA	XXX
4 Eastwick, PA	XXX
5 Glenolden, PA	XXX
6 Market CG0 & CG2, PA	XXX
7 Mayfair, PA	XXX
8 Morrisville, PA	XXX
9 Granby Street, VA	XXX
10 Hull Street, VA	XXX
11 Petersberg, VA	XXX
12 Benning, DC	XXX
13 Frederick, MD	XXX
14 Moorestown, NJ	XXX
15 Franklin Street, MA	XXX
16 Dulles Corner, VA	XXX
average	XXX

END VZ PROPRIETARY >

Exhibit 10 to this testimony contains the backup for this table. The backup for the first 12 entries was provided by Verizon in response to RR-ATT-3; the backup for the last four entries comes from the documentation produced by Verizon and contained in Exhibit ATT-VZ 31-1.

Verizon has now confirmed, in its supplemental response to ATT-VZ 31-38, that the “additional costs” to which it had alluded in its reply brief and to which Mr. Mazziotti alludes in

1 his initial testimony are merely power costs that are separately accounted for in Verizon's power
2 factor, Verizon's engineering and installation costs that are separately accounted for in its EF&I
3 factor, and occasional costs for fiber distribution panels and DSX terminations that are
4 accounted for in separate line items in Verizon's cost studies.

5 **Q. MR. MAZZIOTTI ASSERTS, AT PAGE 14 OF HIS TESTIMONY, THAT THESE**
6 **PRICES “DO NOT REASONABLY REFLECT THE DISCOUNT LEVEL THAT**
7 **VERIZON MA COULD BE EXPECTED TO RECEIVE IN A FORWARD-**
8 **LOOKING ENVIRONMENT...” DO YOU AGREE?**

9 A. Only in the limited sense that the average switching cost per line is likely to be even lower
10 looking forward than the documentation produced by Verizon regarding switch purchases in
11 recent years would suggest. Indeed, this is confirmed by Verizon itself. Verizon has made clear
12 that on a forward-looking basis it expects to pay no more than <Begin VZ Proprietary XXX
13 End VZ Proprietary> per line for switching. Specifically, correspondence produced by
14 Verizon shows that when Verizon solicits bids for new switches it tells switch vendors that,
15 “[c]onsistent with Verizon’s objective of continuous process improvement in cost, quality, and
16 service, we have established a target of <Begin VZ Proprietary XXX End VZ
17 Proprietary> per line” for its new switches. These letters are collected in the attached Exhibit
18 11. They are part of the documentation produced by Verizon and contained within Exhibit
19 ATT-VZ 31-1.

20 Verizon is correct that there continues to be a downward trend in switching prices.
21 Since the Department is in the process of setting forward-looking UNE rates that may be in
22 effect for as much as five years, it should account for the trend recognized by Verizon when

1 setting the switch material price assumption to be used as an input to Verizon's switch cost
2 model.

3 **Q. YOU HAVE EXPLAINED THAT VERIZON'S PER LINE COST FOR NEW**
4 **SWITCHES, WHICH AVERAGE < BEGIN VZ PROPRIETARY XXX END VZ**
5 **PROPRIETARY> PER LINE ACROSS THE 16 SWITCHES DOCUMENTED BY**
6 **VERIZON, ALREADY INCLUDES THE VENDOR ENGINEERING COSTS.**
7 **WHAT MUST THE DEPARTMENT DO TO ENSURE THAT THIS COST IS NOT**
8 **INADVERTENTLY DOUBLE COUNTED?**

9 A. The Department has adopted an EF&I factor of 1.29 or 29 percent for switching. This reflects
10 vendor engineering costs of 12 percent, Verizon (or ILEC) costs of 12 percent, and a sales tax
11 of 5 percent. We now know, from Verizon's own documentation, that the first of these three
12 components is also fully accounted for in the per line switch material price paid by Verizon. It
13 should therefore be eliminated from the EF&I factor, so that the factor is reduced to 1.17 or 17
14 percent. Alternatively, the Department should take the average per line switching cost shown in
15 the documentation of Verizon's 16 new switch purchases, and reduce that figure by 12 percent
16 to eliminate the vendor engineering costs which would then be added back in through the EF&I
17 factor.

18 **Q. COULD YOU SUMMARIZE YOUR CONCLUSIONS REGARDING WHAT THE**
19 **EVIDENCE SHOWS AS TO THE FORWARD-LOOKING PRICE PER LINE FOR**
20 **NEW SWITCHES?**

21 A. Verizon's own documentation confirms that over the past several years the average price
22 Verizon has paid for new switches on a per line basis is very close to the \$36 per line to which
23 Verizon admitted in its reply brief. That same documentation also confirms that the Department
24 should reasonably expect the forward-looking price for switching to be materially lower than

1 this historic price. This is the figure that the Department should adopt; its initial finding on this
2 issue is inconsistent with Verizon's own evidence.

3 Furthermore, this material price includes costs not only of switching hardware, but also
4 includes initial software costs as well as vendor engineering costs. To avoid the double counting
5 of vendor engineering costs, the Department must either reduce the switching material price per
6 line by an additional 12 percent, or must reduce the EF&I factor from 1.29 to 1.17.

7 **IV. NEW SWITCH TO GROWTH EQUIPMENT RATIO.**

8 **Q. AT PAGES 11-12 OF HIS INITIAL TESTIMONY, MR. MAZZIOTTI ASSERTS**
9 **THAT "1.5 PERCENT IS NOT REPRESENTATIVE OF THE GROWTH RATE" OF**
10 **VERIZON'S NETWORK "OVER A LONG PERIOD OF TIME," AND SUGGESTS**
11 **THAT THE DEPARTMENT INSTEAD ASSUME 2.4 PERCENT ANNUAL**
12 **GROWTH FOR THE PURPOSE OF MELDING NEW AND GROWTH**
13 **DISCOUNTS. DOES THIS MAKE SENSE?**

14 A. The 2.4 percent growth cited by Mr. Mazziotti represents the switched access line growth
15 Verizon experienced between 1995 through 2000. Verizon's proposal to use a backward
16 looking growth trend is inappropriate in a forward-looking study. The 1.5 percent factor
17 represents Verizon's own forecast over its three-year study period and reflected the switched
18 access line growth trends available at that time. The only growth that is appropriate to include in
19 a forward looking cost study is forecasted growth based on the most recent trends. The 1.5
20 percent growth used by AT&T/WorldCom in the development of the melded new/growth
21 discount is appropriate, given the latest trends as projected by Verizon itself.

22 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY ON**
23 **RECONSIDERATION?**

24 A. Yes.